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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,141	10/20/2000	James J. Fitzgibbon	70102	2344

7590 07/31/2002
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EXAMINER

RO, BENTSU

ART UNIT	PAPER NUMBER
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2837

13

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/693,141		FITZGIBBON ET AL.	
	Examiner		Art Unit	
	Bentsu Ro		2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/24/02 & 6/7/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32 and 41-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32, 41 and 43 is/are rejected.
- 7) ☒ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved, b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>12</u> . | 6) <input type="checkbox"/> Other: _____ |

FIRST OFFICE ACTION AFTER REQUEST FOR CONTINUED EXAMINATION

1. Applicant's response to examiner's Final Rejection, paper #8, mailed 11/27/2001, was incomplete in that applicant has failed to submit a compact disk for the computer program.

Any computer program listing having over 300 lines must be submitted on a compact disk in compliance with 37 CAR §1.52(e).

A compact disk containing such a computer program listing is to be referred to as a "computer program listing appendix". The computer program listing appendix will not be part of the printed patent.

The specification must include a reference to the "computer program listing appendix" at the location indicated in 37 CAR §1.77(b)(4).

Failure to submit the "computer program listing appendix" may either delay the prosecution of this application or may cause abandon of this application.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 32 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by **Schmitz US Patent No. 4,511,832**. (This is a new reference.)

Claims read onto Schmitz's teaching as follows:

The claims:

Claim 32. (Amended) A motor control for a movable barrier operator, comprising:

a circuit for providing a pulse signal comprising a series of pulses;

Schmitz's teaching:

Fig. 10 shows a motor control for a passenger door (see Fig. 1 for the passenger doors 12, 14, 16, 18 in a vehicle 10);

Fig. 10 shows a micro controller 100, the micro controller 100 provides a pulse signal;

Fig. 5 shows the pulse signal which comprising a series of the control pulses;

a motor control circuit responsive to the pulse signal, for starting the motor

and for determining the direction of rotation of the motor output shaft;

a motor connected to said motor control circuit for moving a barrier

at a speed determined from the pulse signal;

a detector

for detecting a predetermined characteristic relating to movement of the movable barrier;
and

the micro controller 100 and the solid state relays 126-132 (all transistors) together constitute a motor control circuit;
the solid state relays energize the stepper motor windings 60-66 to start the motor;

the micro controller 100 determines the direction of motor rotation, see Fig. 11, step 210, in which, if the answer to the "door closed signal" is "yes", then the motor is rotated in a forward direction; if the answer is "no", then the motor is rotated in a reversed direction;
column 3, lines 10-12; column 4, lines 10, 58; column 5, line 16; etc, all describe the direction and/or speed of the motor;

Fig. 10 shows a stepper motor 92 electrically connected to the solid state relays 126-132; the motor 92 is also mechanically connected to the door apparatus 94 via the motor shaft 142 to move the door apparatus 94;

Fig. 5 shows the pulse signal (or control pulses);
these control pulses energize the motor windings causing the motor rotor to rotate, see Figs. 6-9, therefore, the speed of the motor is determined by these control pulses;

Fig. 10 shows an encoder 160;

the encoder 160 detects the door position by counting the number of pulses;
the encoder 160 also detects the motor speed;
the encoder 160 further detects the motor direction;
any one of the above-listed parameters is a predetermined characteristic related to the door apparatus;

a controller for controlling the generation pulses in the pulse signal,

the pulses of the pulse signal being controlled to vary a speed of the motor linearly from an initial speed

to an adjusted speed determined from the detected characteristic.

Claim 41. (New) A motor control according to claim 32 wherein the detector comprises apparatus for detecting an obstruction to movement of the barrier

the programs shown in Figs. 11-15, take Fig. 11 as an example;

Fig. 11 shows in box 204 a "make one close step", which is an execution of a close control pulse;

the flowchart continues to box 214 "counter zero", if the counter is not zero, the control goes back to box 204 again and the steps continue;

thus, each execution of box 204 is the generation of one pulse in the pulse signal;

Fig. 17 shows a speed profile of the motor in which, motor speed is plotted against the number of control pulses;

the very beginning of the speed profile (Fig. 17) is an initial speed;

the speed increases linearly for each control pulse step;

applicant may argue that the speed profile is linearly in a step-wise, however, applicant must understand that steps are shown in an exaggerated manner (scale expanded);

further, due to the inertia of the motor rotor, it is impossible to control the motor speed at a constant for a very short period of time (one horizontal step) and then suddenly jump to the next upper step;

the speed at any point of Fig. 17 other than the initial speed is an adjusted speed; see summary of the invention in column 1, lines 48-61.

Fig. 15 shows an obstruction detection; in Fig. 15, step 386 "check input" is to check the input from the encoder ;

step 396 determine a zero sensitivity; if the determination is "yes", then obstruction is encountered, see column 8, lines 9-13;

and the controller controls the generation of pulses in accordance with the detection of an obstruction.

Fig. 15, the steps 398 and 400;
step 400 "call open door subroutine" relates to the generation of pulses in an opening direction.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 43 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 43, line 1, the recitation "A motor control arrangement" is different from the independent claim 1, line 1 "A motor control". In other words, claim 43, line 1, the word "arrangement" should be deleted.
6. Claim 42 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claim 43 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
8. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number 703 308-3656.

July 19, 2002

Bentsu Ro
BENTSU RO
PRIMARY EXAMINER